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AMSAT NEWS SERVICE
ANS-011

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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>From AMSAT HQ KENSINGTON, MD.
DATE January 11, 2015
To All RADIO AMATEURS
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Dayton to Host 2015 AMSAT Space Symposium Oct 16-18

Mark Your Calendars !!

AMSAT NA announces that the 2015 AMSAT Space Symposium will be held on Friday through Sunday, Oct 16, 17, 18, 2015 in Dayton, Ohio.

Location will be at the Crowne Plaza , 33 East 5th Street, in Downtown, Dayton.
The Crown Plaza is a 3.5 star Hotel which has been recently renovated.

Some of the perks include
+ Free parking for attendees (with validation from the hotel).
+ Free transportation to and from the airport and within 5 miles of hotel for side trips.
+ Several restaurants are in close proximity and within walking

distance.
+ Several alternate activities and attractions are in the Dayton area.
Air Force Museum
Mendelsons
R&L,
Historical Carillon Park
America's Packard Museum
Local PBS Station, Think TV
+ If you are staying longer in the Dayton area, there are several
other points of interest close by.

2015 AMSAT Space Symposium and Annual Meeting

The annual AMSAT Space Symposium features:

+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite
World
+ Board of Directors Meeting open to AMSAT members
+ Opportunities to Meet Board Members and Officers
+ AMSAT-NA Annual General Membership Meeting
+ Annual Banquet, Keynote Speaker and Door Prizes !!

Several members from The Dayton Amateur Radio Assn as well as many other local clubs will be participating in helping with this event.

Additional information about the 2015 AMSAT Symposium will be posted on the AMSAT web site, www.amsat.org, as it becomes available.

[ANS thanks Steve Coy K8UD and the AMSAT Office for the above information]

Space Station Crew Available for Interviews Live from Orbiting Laboratory

Crew members of Expedition 42, currently aboard the International Space Station, are available for live interviews with media and social media during their mission aboard the orbital laboratory.

Space station commander Barry Wilmore and Flight Engineer Terry Virts of NASA and European Space Agency Flight Engineer Samantha Cristoforetti are on board the station along with their three Russian crewmates, performing scientific research, demonstrating technology and maintaining the complex.

Interviews will be offered in windows of 10 minutes. Interview opportunities will be evaluated based on media audience size, and relevance to current station activities and individual astronauts aboard the space station. All three crewmembers may not be available for every interview.

Interested media should contact Rob Navias at NASA's Johnson Space Center in Houston at rob.navias-1(a)nasa.gov and provide a two-hour window of availability between 8 a.m. and 1 p.m. EST, Monday through Friday.

The crew also is available for interactive, social media events that have the potential to reach significant audiences. All social media platforms will be considered, but interviewers must meet the same requirements as traditional media. No direct web connection to the

space station is available for conducting social media interviews.

To schedule a live social media interview, media should contact Megan Sumner at megan.c.sumner(a)nasa.gov, and provide a two-hour window of availability.

Actual dates and times for each interview will be provided to approved media approximately two weeks before the interview date and are subject to change or cancellation based on operational activity aboard the station.

Television clients will use NASA Television Media Channel 103 to conduct the interviews. Print, radio and internet media must conduct the interviews using a land-line telephone connection and have an additional telephone connection of any type for coordination. All interviews will be broadcast live on NASA TV. Further technical information will be provided to all media upon interview approval.

The International Space Station is a convergence of science, technology and human innovation that demonstrates new technologies and makes research breakthroughs not possible on Earth. The space station has had continuous human occupation since November 2000. In that time, it has received more than 200 visitors and a variety of international and commercial spacecraft. The space station remains the springboard to NASA's next great leap in human space exploration.

Satellite tuning information is available at:
http://go.nasa.gov/1pOWUhR

For information about the International Space Station, visit:
http://www.nasa.gov/station

Source NASA Media Advisory M15-005:
http://tinyurl.com/ANS011-ISSinterviews

[ANS thanks NASA for the above information]]

NASA History Program Office Summer and Fall 2015 Internships

The NASA History Program Office is seeking undergraduate and graduate students for summer and fall 2015 internships. The History Program Office maintains archival materials to answer research questions from NASA personnel, journalists, scholars, students at all levels and others from around the world. The division also edits and publishes several books and monographs each year. It maintains a large number of websites on NASA history.

Students of all majors are welcome to apply. While detailed prior knowledge of the aeronautics and space fields is not necessary, a keen interest and some basic familiarity with these topics are needed. Strong research, writing and editing skills are essential. Experience with social media is a plus.

Intern projects are flexible. Typical projects include handling a variety of information requests, writing posts for the NASA history Twitter and Facebook pages, editing historical manuscripts, doing research and writing biographical sketches, and identifying and captioning photos.

Applications for summer 2015 internships are due Feb. 1, 2015. Fall

2015 internship applications are due June 1, 2015.

For more information, visit http://history.nasa.gov/interncall.htm.

If you have questions about this opportunity, please contact Bill Barry at
bill dot barry at nasa.gov.

[ANS thanks NASA Education Express Message for Jan. 8, 2015 for the above information]

Dariusz Dabek, SP9TTX Earns 6th 73 on 73 Award

Congratulations to Dariusz Dabek, SP9TTX, for becoming the sixth recipient of the 73 on 73 Award. He submitted a list of 78 stations worked via AO-73 between September 1, 2014 and January 3, 2015.

Reviewing the recent log submissions for the award, it appears that the full time transponder activation over the holiday season attracted several new users to the satellite.

Paul Stoetzer N8HM is sponsoring the award for contacts made via the AO-73 (FUNcube-1) amateur radio satellite.

1. Work 73 unique stations on AO-73.
2. Contacts must be made on or after September 1, 2014.
3. There are no geographic restrictions on your operating location.

There will be no cost for this award (donations to AMSAT-UK and AMSAT-NA's Fox program are encouraged though).

No QSL cards are required. When you complete the requirements, email your log extract including the callsign of each station worked, time GMT, and date to n8hm(a)arrl.net as well as the address where you'd like the award certificate sent.

For more information on the award see
http://amsat-uk.org/funcube/73-on-73-award/

[ANS thanks Paul Stoetzer N8HM for the above information]

Next US ARISS Contact Proposal Window opens February 15

The next call for proposals for US entities to host an ARISS contact is coming up in February, 2015.

Call for Proposals

Proposal Window February 15 - April 15, 2015
The Amateur Radio on the International Space Station (ARISS) Program is seeking formal and informal education institutions and organizations, individually or working together, to host an Amateur Radio contact with a crew member on board the ISS. ARISS anticipates that the contact would be held between January 1, 2016 and June 30, 2016. Crew scheduling and ISS orbits will determine the exact

contact dates. To maximize these radio contact opportunities, ARISS is looking for organizations that will draw large numbers of participants and integrate the contact into a well-developed education plan.
The deadline to submit a proposal is April 15, 2015.

The Opportunity

Crew members aboard the International Space Station will participate in scheduled Amateur Radio contacts. These radio contacts are approximately 10 minutes in length and allow students and educators to interact with the astronauts through a question-and-answer session. An ARISS contact is a voice-only communication opportunity via Amateur Radio between astronauts and cosmonauts aboard the space station and classrooms and communities. ARISS contacts afford education audiences the opportunity to learn firsthand from astronauts what it is like to live and work in space and to learn about space research conducted on the ISS. Students also will have an opportunity to learn about satellite communication, wireless technology, and radio science. Because of the nature of human spaceflight and the complexity of scheduling activities aboard the ISS, organizations must demonstrate flexibility to accommodate changes in contact dates and times. Amateur Radio organizations around the world, NASA, and space agencies in Russia, Canada, Japan and Europe sponsor this educational opportunity by providing the equipment and operational support to enable direct communication between crew on the ISS and students around the world via Amateur Radio. In the US, the program is managed by AMSAT (Radio Amateur Satellite Corporation) and ARRL (American Radio Relay League) in partnership with NASA.

More Information

Interested parties can find more information about the program at www.ariss.org and www.arrl.org/ARISS. More details on expectations, audience, proposal guidelines and proposal form, and dates and times of Information Sessions are available at http://www.arrl.org/hosting-an-ariss-contact

Please direct any questions to ariss(a)arrl.org.

[ANS thanks ARISS for the above information]

FUNcube-2 on UKube-1 - Jan 2015 update

Limited testing of the FUNcube-2 435/145 MHz linear transponder on the UKube-1 spacecraft has been undertaken during the recent holiday period.

This testing has shown that the transponder is able to work effectively and that it is capable of a similar performance to the transponder already operating on FUNcube-1.

AMSAT-UK and the FUNcube team have now submitted a detailed report on the testing to the UK Space Agency, who are the owners and prime operators of the UKube-1 spacecraft. It is expected that a meeting will be held with them late January or early February to plan possible future testing and operations.

Reception of UKube-1 FUNcube-2 Beacon

http://tinyurl.com/ANS011-FuncubeBeacon

[ANS thanks AMSAT-UK for the above information]

SHIN-EN2 Designated as Fuji Oscar 82

William A. (Bill) Tynan, W3XO, OSCAR Number Administrator has confered on SHIN-EN2 the designation Fuji OSCAR-82 or FO-82.

In reply to Seiji Fukushima's, JH6RTO, request for an OSCAR number, Bill said, "I along with all in AMSAT-NA and the world's Amateur Radio satellite community congratulate you and all involved with Fuji OSCAR-82 and trust that it will fulfill all of its mission objectives. FO-82 joins an illustrious line of Fuji spacecraft built and launched by Japan."

Shin-En2 is a 17 kg satellite measuring 490×490×475 mm built by students at Kagoshima University in Japan which will carry a 145 to 435 MHz linear transponder into a deep space orbit.

The aims of the mission are:
* To establish communication technologies with a long range as far as moon.
* To establish a new technology of the ultra-light-weight satellite. Proposing a WSJT 29dBm UHF downlink and a 29dBm 20 kHz linear transponder and a CW beacon all on UHF with a VHF uplink for the transponder

The orbit will be quite different from the previous satellites. Shin-En2 will have an elliptic orbit around the Sun and travel to a deep space orbit between Venus and Mars. Its inclination will be almost zero, which means Shin-En2 will stay in the Earth's equatorial plane.

The distance from the Sun will be between 0.7 and 1.3 AU. An Astronomical Unit (AU) is 149,597,871 km.

Shin-En2 IARU coordinated frequencies:
* 437.505 MHz CW beacon
* 437.385 MHz WSJT telemetry
* Inverting SSB/CW transponder
- 145.940-145.960 MHz uplink LSB
- 435.280-435.260 MHz downlink USB

Shin-En2 launched in the 4th quarter of 2014 with another amateur radio satellite, ARTSAT2:DESPATCH, on a H-IIA rocket with the asteroid explorer Hayabusa 2 as the main payload.

Kagoshima University satellite development team
http://tinyurl.com/Kagoshima-Satellite

Shin-En2 English Website
http://www.eee.kagoshima-u.ac.jp/~fuku-lab/sinen,english.html

ARTSAT2:DESPATCH - Art and Ham Radio in Deep Space
http://amsat-uk.org/2013/11/03/art-and-ham-radio-in-deep-space/

[ANS thanks AMSAT-NA and AMSAT-UK for the above Information]

FOX Challenge Coins Still Available

It's a new year, and hopefully we have all recovered from the holidays. Here at AMSAT Fox fundraising HQ, we are busy packing up the new batch of coins that came in over the holidays, to ship to our generous donors. This year will see the launches of Fox-1A and -1C, both carrying university experiments and VHF/UHF ham radio repeaters. Help us keep ham radio in space with your donation and sharing our FundRazr link via social media.
http://www.amsat.org/?p=3275

The Fox program is designed to provide a platform for university experiments in space, as well as provide FM repeater capability for radio amateurs worldwide. Fox-1A and 1C are set to launch in 2015, and Fox-1B (also known as RadFXSat) is awaiting NASA ELANA launch assignment. Further information on the Fox project can be found at http://www.amsat.org/?page_id=1113.

[ANS thanks Drew KO4MA for the above Information]

Successful ARISS Contacts with three Italian schools

Contacts with 3 Italian schools Friday January 9, 2015 were successful. The events included students at Scuola Santa Teresa del Bambin Gesù, Roma, Italy, direct via IKØUSO, students at Istituto Salesiano Villa Sora, Frascati, Italy, direct via IWØCZC, and students at Scuola Pontificia Pio IX, Roma, Italy, via telebridge with IK1SLD. The contact was with Samantha Cristoforetti using the callsign IRØISS the contact began 10:14:09 UTC, which is 11:14:09 CEWT.

The downlink was audible in Europe on 145.800MHz FM.

Images of event taken at Scuola Pontificia Pio IX, Roma:
https://www.flickr.com/gp/82104276(a)N02/xvhd78/

Audio of both contacts established per direct/telebridge today:
http://www.amsat.it/audio/ARISS_January092015_1011UTC.mp3
http://www.amsat.it/audio/ARISS_January092015_1145UTC.mp3

Schools represented:

Scuola Santa Teresa del Bambino Gesù
The school "Santa Teresa del Bambino Gesù" is a catholic primary school in Rome, established to answer to the needs and demands for Catholic education by the local population. The school belongs to the Congregation of Missionary Carmelitane Sisters of Saint Therese of Jesus Child. The school is open to families that take care of the religious education and formation of their children. Preparation for the ISS radio contact has been underway for a long time, including educational projects on different scientific topics to support the special event.

Istituto Salesiano Villa Sora
Villa Sora is located on the side of the ancient Roman boulevard (now Via Tuscolana) in an area known as Tusculanus ager, which is full of sumptuous villas, including those of Cicero, Lucullus and Sulpicius Galba. This villa was built as a country house in the same

grounds of Lucullus` villa in the mid-16th century and it was originally known as 'Torricella'. The earliest documentation of its history dates back to 1546, when the Chapel of Sancta Sanctorum of Rome owned the villa. The land currently measures over 6 acres and includes, in addition to the house and the school, a large park with several building lots.

The school of Villa Sora has a notable historical tradition. Since 1925, it has a primary school and a liceo classico. The liceo scientifico was founded in 1966 and in 1986 its admission was opened to girls. In 1989, the middle school was created, and finally, in 2011, a new liceo economico sociale was founded. The middle school now has 200 students divided in three classes. The liceo classico has 180 students, the liceo scientifico 280 and the liceo economico sociale 80, for a total of 740 students.

The space conversation was conducted in Italian. The following 20 questions were answered by Samantha Cristoforetti as well as greetings and wishes before LOS. This was amazing as Samantha responded very exhaustively and with many details.

Translation:

1. The time of the re-entry into the atmosphere seems to be less evolved. There are studies underway to modify or change this stage?
2. How long does it take to arrive on the international space station?
3. What is the equipment of the astronaut during extra vehicular activity?
4. What kind of material is made the surface that covers the lower part of the spacecraft re-entry?
5. How many km / h you travel to reach the international space station?
6. The extra vehicular activities that you will do will umbilical or free? What goals and how they will be held?
7. How does the deceleration during re-entry?
8. The control of the flight on the Soyuz is automatic or are you a pilot?
9. How does the return to the international space station after an extra vehicular activity?
10. After take-off part of the missile is dispersed in space?
11. Which angle is formed between the trajectory of the spacecraft and the Earth's surface during re-entry? What are the risks an angle of re-entry is not correct?
12. Samantha, you are the first Italian woman to do extra vehicular activity. What are your feelings and what your concerns about it?
13. What happens to take off when passing through the Earth's atmosphere?
14. During the return to earth, how much gravitational force suffer the astronauts?
15. There is the possibility of accidents during extra vehicular activity?
16. When it takes off there is a lot of turbulence?
17. Why do astronauts after the mission should go in quarantine? What happens at the neurological level?
18. How do you prepare for extra vehicular activity? What is the training and simulations?
19. It was more exciting to enter into the international space station or the time of takeoff?
20. How do you manage to fit into a specific point on the earth, without risk to human life and the environment?

ARISS is an international educational outreach program partnering the participating space agencies, NASA, Russian Space Agency, ESA, CNES, JAXA, and CSA, with the AMSAT and IARU organizations from

participating countries.

ARISS offers an opportunity for students to experience the excitement of Amateur Radio by talking directly with crewmembers onboard the International Space Station. Teachers, parents and communities see, first hand, how Amateur Radio and crewmembers on ISS can energize youngsters' interest in science, technology and learning.

[ANS thanks Gaston ON4WF and Francesco IK0WGF, ARISS for the above information]

ARISS News

Upcoming ARISS Contact Schedule

Richmond Heights Middle School, Miami, FL, anticipates a direct contact via W1HQL, scheduled for Thursday 2015-01-15 16:09:40 UTC. Because this is a reschedule due to the delay of the SpaceX resupply mission timing depends on the the school confirming availability. As of press time, ARISS was still awaiting word of the confirmation. The downlink should be audible across the SE USA. The contact will be held in English and is scheduled to be with Samantha Cristoforetti IZØUDF using the callsign NA1SS.

RICHMOND HEIGHTS MIDDLE SCHOOL
Richmond Heights Middle School opened its doors in 1963 in the Richmond Heights community in southwest Miami, Florida. The now 50 year old school, is located in a historic African American Community. An army captain by the name of Frank C. Martin believed it to be a wise investment as well as the right thing to do to establish a housing development in which Black veterans of WWII could purchase their own home. There are currently 636 students and a teaching staff of 41 faculty members. Along with its exemplary athletics program, full time gifted program, and Cambridge program, Richmond Heights Middle School offers a Zoology Magnet program to the students of Miami Dade County Public Schools. This is an extremely unique magnet program that is one of only three in the nation. The zoology magnet is a result of a partnership with Zoo Miami, the Zoological Society of Florida and Richmond Heights Middle School. It has been in existence since 1988. Students have the unique opportunity to visit the zoo to study the animals within their exhibits while engaging in STEM fields of study.

BIOTECH @ RICHMOND HEIGHTS 9-12 HIGH SCHOOL
BioTECH @ Richmond Heights 9-12 High School is the only Conservation Biology public magnet high school is the United States and boasts three campuses: our educational center at Richmond Campus, our Research Station at Zoo Miami, and our Botanical Outpost at Fairchild Tropical Botanic Garden. BioTECH provides students with a challenging and advanced level math and science curriculum focused on Conservation Biology that exposes them to rigorous STEM coursework as well as research opportunities with practicing scientists in state-of-the-art laboratories. In classes taken on-site at Zoo Miami, students study the human impact on biological diversity, making BioTECH the only school in the country to offer a full research and teaching facility within zoo grounds. Research experiences are offered in collaboration with the local zoo and the local research and botanic garden. BioTECH is currently home to 130 students that travel within the boundaries of a 467 square mile area to attend this unique school. The school opened its doors in August 2014 with a total of 8 faculty members, 7 support staff members, and an arsenal of practicing scientists and conservation educators from Fairchild Tropical Botanic Garden, Zoo Miami, Zoological Society of Florida, Everglades National Park, The Dumond Conservancy, and Biscayne

National Park.

The following is the list of the anticipated questions:

1. How would astronauts combat disease, say an accidental infection by a Salmonella culture, given the increased virulence of microbes in space?
2. What kind of work is the crew doing in support of the future missions to Mars?
3. We have a 3D printer in our school. What are the future implications of having a 3D printer on-board? What types of prints will you create?
4. Does experiencing a sunrise/sunset every 90 minutes change your sleep/wake cycles?
5. Do you feel physical exhaustion in space at the end of your work day? How long is your work day?
6. Without gravity, how do plants, such as Arabidopsis, determine orientation germination? Geotropism what do roots do? Do plants on the ISS grow in all different directions?
7. Do you feel stressed on the space station? How do you cope with stress on a space station and does it have more or less of an effect on your immune system in space? Measure muscle conditioning?
8. How are astronaut diets altered to accommodate the changes to the digestive system in microgravity?
9. All work and no play can be boring. What do you do for fun up in space?
10. How do you keep from feeling trapped in the space station?
11. What role did your education play in becoming an astronaut?
12. Which teacher influenced you the most in your life and why?

[ANS thanks ARISS for the above information]

Satellite Shorts From All Over

+ CQ To Combine Jan/Feb 2015 Issues

(Hicksville, NY, January 9, 2015) -- CQ magazine today announced that it will be publishing a combined January/February 2015 issue and will be ceasing publication of its "CQ Plus" digital edition supplement as of the March 2015 issue. Both moves are intended to help restore the magazine's normal schedule for its print edition and to strengthen its foundations moving forward as it enters its eighth decade of publication, said Publisher Dick Ross, K2MGA. "These decisions were not made lightly," he added, "but in recognition of the realities of the publishing industry. It's a tough time to be in the magazine business, and we appreciate the patience and loyalty of both our readers and our advertisers."

CQ will continue to publish both print and digital editions, but the digital edition will no longer contain the 50-60 additional pages each month that constituted "CQ Plus." Editor Rich Moseson, W2VU, noted that he hopes to include some former CQ Plus content within the pages of CQ, but says ham radio will remain the magazine's primary focus, as it has been for the past seven decades. CQ is marking its 70th anniversary of publication as of its January/February issue.

As a consequence of the changes, CQ Plus Editor Richard Fisher, KI6SN, will be leaving the CQ staff after serving for many years as a columnist for, and then as editor of, Popular Communications,

WorldRadio Online and CQ Plus. He was also CQ magazine's Emergency Communications Editor. "We will miss Richard's many contributions to CQ's products," noted Moseson, "and thank him for his many years of service to our readers."

Subscribers to both the print and digital editions of CQ will have their subscriptions extended by one month due to the combined January/February issue.

CQ <www.cq-amateur-radio.com> is the world's leading independent amateur radio magazine, serving the amateur radio community worldwide since 1945. It is published in three languages (English, Spanish and Portuguese) and in both print and digital formats.

[ANS thanks Rich Moseson, W2VU, CQ Magazine for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, KC8YLD
kc8yld at amsat dot org